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legends about its *buried city*. Yet Bannow does, and will ever possess attractions for the Irish antiquary, and historian; for though her lofty towers may not lie buried beneath the sands, still it can never be forgotten that here the banner of the "proud invader" was first planted on the Emerald Isle.

ANCIENT IRISH STAINED GLASS.

BY THE REV. JAMES GRAVES.

[*Read at the Meeting of January 2nd.*]

That section of archæology, which relates to the history of the manufactures and industrial arts of our ancestors, is perhaps one of the most interesting and useful branches of a science—I am happy to believe—rapidly taking its place amongst the pursuits with which every educated man feels himself bound to become conversant. It is now acknowledged that our ancestors carried to perfection many arts which we moderns have lost, or are but slowly recovering.

At the last meeting of this Society I had the honour of drawing the attention of the members to the long disused, and but recently revived manufacture of decorative pavement tiles, as illustrated by specimens from the various churches of Kilkenny, now deposited in the Society's museum; and I endeavoured to shew that, even in a utilitarian point of view, the study of antiquity is not such a useless "back-looking curiosity" as some would have us to suppose. I am, on the present occasion, enabled to illustrate, also from our recently formed museum, another art brought to very great perfection in days of yore—a perfection which the present age, notwithstanding its superior scientific knowledge, has scarcely yet equalled. I allude to the art of staining, and painting on glass. The examples of the different descriptions of decorative glass used in the fourteenth century, and which I now submit to the meeting, are selected from a considerable quantity of that material, found during the summer of 1846, in the course of some excavations then being carried on at the Cathedral of St. Canice, and since presented to the museum of the Society by its Very Rev. President, the Dean of Ossory—a gift, the value of which is enhanced by the fact, that in no other part of Ireland does there at present exist an example of glass, at the same time so ancient and so unquestionably genuine. Every one has heard of the famous painted windows—said to have exhibited the history of our Saviour—formerly the pride of our Cathedral, and erected in the 14th century by Bishop Richard de Ledrede—for which the Legate Rinuccini offered £700, and which shortly after-

wards were demolished by the iconoclastic bigotry of Cromwell's soldiers. Griffith Williams, who filled the See of Ossory during those troublous times, thus records the lamentable destruction which then took place—"And the great, and famous, and most beautiful Cathedral Church of St. Keney, they have utterly defaced and ruined, thrown down all the roof of it, taken away five great and goodly bells, broken down all the windows, and carried away every bit of glass, that they say was worth a great deal; and all the doors of it, that the hogs might come and root, and the dogs gnaw the bones of the dead." They alone whose pursuits lead them to weigh the truth of history, can appreciate the satisfaction afforded to the mind when collateral and independent facts confirm the statements even of authors whose credit is unshaken, affording a spot of firm ground whereon to take one's stand amidst the shifting sands of mere assertion. Thus, for instance, with these fragments of glass, and twisted and broken leads before us, coupled with the circumstances and locality of their discovery, we can vividly picture to the mind's eye the glorious windows of de Ledrede, and their ruthless destruction when the fanatic soldiers of the Commonwealth desecrated the Cathedral. These important and interesting remains of its ancient stained glass were brought to light in the course of excavations made in the early part of the summer of 1846, for the purpose of investigating some ancient foundations adjoining the north wall of the choir, and immediately under the three lancet windows with which that wall is pierced. About four feet under the present surface the workmen struck on a stratum of broken fragments of painted and stained glass, intermixed with portions of the ancient leads. This stratum extended about three feet from the wall. It had evidently been broken down from the windows above, as scarcely a quarry of it remained entire, and the leads were much twisted and bent. The spoliators plainly had a keen eye to business, even amidst their iconoclastic zeal, as the remains of a large wood fire, amounting to nearly a horse-load of charcoal, were discovered in the same locality. Into this the glass, when torn down from the windows, had evidently been cast for the purpose of melting down the lead, as appears from the portion of melted glass and lead, and lumps of conglomerate matter found amongst the charcoal, which I now lay before the meeting. The glass is of various kinds, viz., white, opaque, painted, and stained; the stained glass consists of purple, blue, ruby, amber, amethyst, and a rich ultramarine; with intermediate shades of these colours. The painted glass exhibits portions of flowers or leaves painted in a red stain, on white or semi-opaque glass, and then burned in. After a careful examination of the entire mass, I have not been able to discover more than four or five fragments exhibiting traces of the human figure. The principle on which the leads were constructed deserves particular attention. It will be observed that they are easily bent in the direction of the *plane of the window*, being thus readily adapted to the form of each pane or quarry of the glass. Whilst in a

direction *perpendicular to the plane of the window*, they would offer considerable resistance, and are consequently well calculated to resist storms and other deranging forces. In both these particulars the ancient leads are vastly superior to the modern, which afford little or no resistance to lateral pressure, and are consequently liable to receive injury from high winds.

I must claim the indulgence of the meeting whilst I briefly consider the peculiar characteristics of glass manufactured in the fourteenth century; and proceed to show that the glass, now in the Society's museum, discovered in 1846 at the Cathedral of St. Canice, answers in every point to these *criteria*, and may, therefore, indisputably be assumed to form the debris of some of the windows erected by Richard de Ledrede, about the middle of the fourteenth century, and which subsequently attracted such general admiration. And here I should observe, that I have chiefly based my statements on a private communication received at the time from one of the most competent authorities—viz., Charles Winston, Esq., Middle Temple, London, whose "Introduction to the Study of Painted Glass," forms a standard work of reference on the subject. According to Mr. Winston, the *criteria* of style depend both on the peculiarities of the glass itself, and of the leads in which it is set. He states that the fourteenth century glass is distinguishable by the nature and texture of the material, by its colour, and the mode of painting on it. The texture of the glass is sometimes impure, and often nearly opaque; frequently we find it incrustated with a brown ferruginous coating—the effects of decomposition—produced by exposure to the atmosphere; or perforated with little round holes about the size of a pin's head, also the effect of decomposition. Glass of this period, too, is liable to scale off in *laminae* like slate. The plain glass is frequently of a rich sea-green hue, varying in depth according to the manufacture, and also, of course, according to the thickness of the sheet. Some of the plain glass of this time (and the remark applies also equally to coloured glass) is very thick, ranging from about a quarter of an inch to a sixteenth, or under. The colour and mode of producing it afford also another mode of determining the age of glass. In the fourteenth century the yellow and ruby stains were produced in a very peculiar way, namely, by a coating of yellow or ruby glass laid over a substratum of white, and often presenting a streaked and uneven appearance, as if laid on with a brush. The yellow stain introduced after 1300 is easily distinguished from yellow coloured glass of a uniform texture. The yellow stain only penetrates a little way into the white glass, usually about the thickness of writing paper; whilst the former is coloured yellow throughout its entire substance; and together with all such homogeneously tinted glass of whatever colour, is technically termed 'pot-metal.' The yellow 'pot-metal' glass was employed throughout the entire period over which glass painting extends. Ruby glass is invariably coloured on one side only

of the sheet, the substratum being of white glass. The layer of colouring matter varies much in thickness according to the age of the glass, the oldest being of considerable substance; and frequently when viewed edgeways it presents the appearance of several *laminae* of ruby, imbedded in white glass.* Examples of nearly every variety which I have mentioned are to be found amongst the glass in our museum. The other kinds of coloured glass, and which occur of almost every variety of tint, are homogeneous in their texture, being composed of 'pot-metal.' The different varieties already enumerated exhibit no painting on the surface of the glass, and served to produce patterns by being cut into small panes, or 'quarries,' as they are technically denominated. Geometrical patterns, *i.e.* patterns formed by various combinations of the circle, the spherical triangle, &c., are especially characteristic of fourteenth century Gothic work. One would, therefore, expect to find quarries calculated to form geometrical patterns amongst the debris of de Ledrede's glass, nor are we disappointed in this expectation. Many quarries, still remaining entire, and numberless fragments presenting a similar character, prove the predominance of geometrical designs in the decoration of these windows. Painted glass of the fourteenth century was executed in an enamel tint of a reddish brown colour, composed of an oxide of iron, mixed with a soft glass, or flux, to cause it to adhere to the glass permanently; all such painted glass was subjected to the action of a strong heat in order to fuse the flux and cause the colouring to become fixed. The patterns in vogue during the fourteenth century generally consisted of a running scroll, formed by a tendril with ivy, maple, vine, or oak leaves springing from it. The lines are generally marked pretty strongly. A large proportion of this description of glass was found at the Cathedral of St. Canice.

It may be observed of all ancient leads, as a general characteristic, that they present a narrow surface to the eye, whilst strength and rigidity, in a line at right angles to the plane of the window, is attained to a much greater degree than the usual form of modern leads can possibly afford. The leading chiefly used in the fourteenth century presents a section somewhat like the letter I. Of this variety many specimens were discovered, intermingled with glass, at the Cathedral of St. Canice. Anciently (according to Theophilus) the leads were cast in a mould, and the specimens before us have all that character. It were to be wished that modern Irish manufacturers would take a lesson from these ancient examples, in which the same quantity of metal is so managed as to afford *flexibility* in a line with the plane of the window (thus affording facility for the composition of the most intricate design); great *rigidity* to the action of high winds and storms, and a

* Purple glass was sometimes produced at this period by enclosing a stratum of blue glass between two strata of the ruby stain; but I have found no example of it amongst the St. Canice glass.

narrow surface presented to the eye—qualities, in all of which the modern leading is sadly deficient.

From what has been said, we may, I think, safely conclude that the glass and leads exhumed in 1846 belong to the fourteenth century, and once formed portion of the celebrated windows erected by Bishop de Ledrede about 1346. It is true that one objection presents itself. The windows in question are said to have been adorned by a series of compositions illustrative of the life of our Saviour; whilst, amongst the fragments discovered, but few can be referred to the human face or figure. But, irrespective of the fact that some specimens of the glass must, I conceive, be referred to this class of design, there are two considerations which, in my mind, serve in a great degree to obviate this objection. The first is, that any representation of the human form would be peculiarly obnoxious to the iconoclastic zeal of the puritan despoilers of the Cathedral; all such they would, therefore, take particular care to deface. Secondly, we must recollect that no remains of the glass of the great east window have been discovered, the fragments under consideration having been exhumed from beneath the north windows of the choir; whilst all testimony concurs in stating that to the former belonged the designs representing the gospel history. We may, therefore, reasonably conclude, without any straining of facts to suit the supposition, that the north windows, although rich in all the varied hues of stained and painted glass, were chiefly filled with mosaic or geometric designs, together with that peculiar scroll-work of the period, to which I have already alluded. At all events, 'that the glass in question is of the fourteenth century,' as Mr. Winston observes, 'there cannot be the slightest doubt.'

Having thus briefly laid before the Society my reasons for assuming that we have here a portion of de Ledrede's windows, I shall only observe in conclusion that the peculiar circumstances under which this interesting reman of mediæval art has been preserved for so long a period, has not been without its effect on it. The dampness of the soil by which it was covered has rendered it extremely brittle, and the reason of this is, that the soda, which enters more or less into the fabric of all glass, has been decomposed and separated from the silicious particles—an effect not only liable to ensue from the position in which this glass was discovered, but also from the action of damp even above ground.

ADDENDUM.

Page 229, after last line add—

Since the foregoing was in print I have been informed by the Rev. James Graves, that Ledwich has committed a twofold mistake in stating that the "*Sacri Lus*" was lost, and that the poems were composed by the young gentlemen of Kilkenny College. The volume in question is still to be found in Primate Marsh's Library, Class K. 3. Tab. 5. No. 9; and is entitled "*Sacri Lus* *In Vsum* Scholæ Kilkenniensis. Dublinii: Typis Regiis, & Venum dantur apud Josephum Wilde. c1o locL. * * *". The date is defective, having been partly cut away by the binder. The book is in small quarto, and is imperfect, ending at p. 64; it consists of Latin poetry in elegiac measure, chiefly on Scripture subjects. On the fly-leaf is written, in an old hand, "Daniel Mead, ex dono Geo. Pigott." On the title, "Mich. Jephson"; whose library was purchased by Primate Marsh.

CORRIGENDA.

- p. 117, l. 8, for "Anglesea" read "Anglesea".
- p. 133, l. 27, for "these" read "those".
- p. 142, l. 34, for "of" read "of".
- p. 148, note, l. 1, after "Phœnician" dele „.
- p. 157, l. 17, for "*Muillend*" read "*Muilend*".
- ib., l. 24, for "*Maelodron*" read "*Maelodran*".
- p. 164, l. 11, for "*Muilenu*" read "*Muilenn*".
- p. 174, l. 35, for "connection" read "connexion".
- p. 177, l. 9, for "*barry of four*" read "*four barrulets*".
- p. 182, l. 27, for "Edward" read "Edmond".
- p. 187, l. 31, for "twenty-four" read "fourteen".
- p. 191, l. 27, after "of" insert "the".
- p. 192, l. 37, after "tenure" dele „.
- p. 193, ll. 44, 45, for "two trefoil-headed niches" read "a shallow canopy".
- p. 195, ll. 14, 22, for "Sugard" read "Ingard".
- p. 198, l. 8, for "acre" read "Loftus acre".
- ib., l. 18, for "Ballymagin" read "Ballymagir".
- p. 200, l. 9, after "rain" dele „.
- p. 213, l. 39, for "meta" read "metal".
- p. 216, l. 34, for "Vol. I." read "Vol. II".
- ib., l. 35, for "*luaned*" read "*luæued*".
- p. 222, l. 15, for "magnificent" read "magnificent".
- p. 240, l. 39, after "brothers" dele „.
- p. 260, l. 32, for "of Nassau" read "daughter of the first Duke of Beaufort".